

MS#307882.01 (5113)

**Amendments to the Claims:**

Claim 1. (canceled).

Claim 2. (currently amended) The method of ~~claim 1~~ claim 5, wherein the encoded data indicates a unique position on the surface so that the position of the symbol within each surface window indicates the unique position on the surface.

Claim 3. (currently amended) The method of ~~claim 1~~ claim 5, wherein said dividing the ordered sequence of digits comprises dividing the ordered sequence of digits into a plurality of non-overlapping and equally sized sequential windows.

Claim 4. (canceled).

Claim 5. (currently amended) ~~The method of claim 4,~~ A method of encoding data in a pattern of symbols on a surface, said method comprising:

dividing an ordered sequence of binary digits representative of the encoded data into a plurality of sequential windows, wherein each of the sequential windows includes a partial sequence of the ordered sequence of digits;

transforming the partial sequence included in each sequential window into a series of digits, wherein said transforming comprises:

representing the partial sequence included in each sequential window as a decimal digit,

applying a mathematical function to the decimal digit, wherein said applying the mathematical function to the decimal digit comprises applying a predetermined number to a power of a value of the decimal digit,

transforming the decimal digit that has been applied with the mathematical function into a binary representation, and

wherein the binary representation indicates the series of digits; and  
arranging a symbol within a plurality of surface windows on the surface, wherein each surface window corresponds to one of the sequential windows, wherein a position of the symbol within each surface window is based on one of the transformed series of

MS#307882.01 (5113)

digits, and wherein the position of the symbol within the surface window is indicative of the encoded data.

Claim 6. (original) The method of claim 5, wherein the predetermined number is 2.

Claim 7. (original) The method of claim 5, wherein said transforming the decimal digit comprises transforming the decimal digit that has been applied the mathematical function into the binary representation having a predetermined length, and wherein said arranging the symbol within the surface windows on the surface comprises determining a position of a selected binary digit type within the length of the binary representation and arranging the symbol within the surface windows based on the determined position of the selected binary digit type.

Claim 8. (original) The method of claim 7, wherein the selected binary digit type is "1".

Claim 9. (currently amended) The method of claim 5 ~~claim 4~~, further comprising arranging the ordered sequence of digits as a function of a geometric shape of the surface, and wherein said dividing the ordered sequence of digits comprises dividing the ordered sequence of digits into the plurality of sequential windows based on the geometric shape of the surface.

Claim 10. (original) The method of claim 9, wherein the geometric shape of the surface is rectangular, and wherein said arranging the ordered sequence of digits comprises arranging the ordered sequence of digits as a rectangular array.

Claim 11. (currently amended) The method of claim 5 ~~claim 4~~, wherein the ordered sequence of digits has a characteristic such that a location in the ordered sequence of digits of each partial sequence of a predetermined length is unambiguously determined.

MS#307882.01 (5113)

Claim 12. (currently amended) The method of claim 5 ~~claim 4~~, wherein one or more computer-readable media have computer-executable instructions for performing the method recited in claim 1.

Claims 13-28. (canceled)

Claim 29. (currently amended) The system of claim 31 ~~claim 28~~, wherein the encoded data indicates a unique position on the surface so that the position of the symbol within each surface window indicates the unique position on the surface.

Claim 30. (canceled).

Claim 31. (currently amended) ~~The system of claim 30~~ A system for encoding data in a pattern of symbols on a surface, said system comprising:

a processor configured to execute computer-executable instructions to:

separate an ordered sequence of binary digits representative of the encoded data into a plurality of sequential windows, wherein each of the sequential windows includes a partial sequence of the ordered sequence of digits, and

transforming the partial sequence included in each sequential window into a series of digits, wherein the computer-executable instructions to transform the partial sequence included in each sequential window comprise computer-executable instructions to:

represent the partial sequence included in each sequential window as a decimal digit,

apply a mathematical function to the decimal digit, wherein said computer-executable instructions to apply the mathematical function comprise computer-executable instructions to apply a predetermined number to a power of a value of the decimal digit,

MS#307882.01 (5113)

convert the decimal digit that has been applied with the  
mathematical function into a binary representation, and  
wherein the binary representation constitutes the series of digits;  
and

means for arranging a symbol within a plurality of surface windows on the  
surface, wherein each surface window corresponds to one of the sequential windows,  
wherein a position of the symbol within each surface window is based on one of the  
transformed series of digits, and wherein the position of the symbol within the surface  
window is indicative of the encoded data.

Claim 32. (original) The system of claim 31, wherein the predetermined number is 2.

Claim 33. (original) The system of claim 31, wherein said binary representation has a predetermined length, and wherein said symbol is arranged within each surface window by determining a position of a selected binary digit type within the length of the binary representation and placing the symbol within the surface window based on the determined position of the selected binary digit type.

Claim 34. (original) The system of claim 33, wherein the selected binary digit type is "1".

Claims 35-40. (canceled).